REMARKS

The Examiner indicated claim 24 as allowable if placed in independent form. This has been done as new independent claim 53.

The Examiner rejected previous claims 1-7, 9, 10 and 15-19 under 35 U.S.C. §102 as anticipated by Snowbarger. The Examiner rejected claim 13 under 35 U.S.C. §103 as unpatentable over Snowbarger in view of Rosenberg. Claim 14 was rejected under 35 U.S.C. §103 as unpatentable over Snowbarger in view of Scheideler. Claims 22, 23, and 25 were rejected under 35 U.S.C. §103 as unpatentable over Snowbarger in view of Konieczynski.

Claims are interpreted in view of the specification. The correct interpretation of the meaning of claim 26 can easily be determined by its relationship to Applicants drawing figure. In the preferred embodiment of the drawing, the control valve is 2, the pneumatic actuator is 3, the control unit is 4, the incident signal line input is 6, the position controller connected to a sensor 13 is 7, and the test signal connection is 11. By analogy, in Snowbarger the pneumatic actuator is 17, the control unit is 20 and 16 together, the incident signal line input is 22, the position controller connected on line 30 to the sensor is 14, and the test signal connection (a pneumatic test signal) is line 28.

New method claim 26 distinguishes over Snowbarger at least in the following ways. Claim 26 recites a control unit coupled to the actuator and an incident line input to the control unit to cause the control unit and actuator to open or close the control valve in the event of the incident. The claim then recites the step of testing operational capability of the safety system including the control unit with a position controller receiving a measurement value from the sensor and which generates a test signal and sends it to operate the same control unit to which the incident signal

line is input so that the control unit is operated to partially move the coupling element via the actuator; and with the measurement value from the sensor determining whether the control unit and the pneumatic actuator have correctly operated the control valve. In Fig. 1 of Snowbarger, the DVC unit 14 is the position controller since it has the sensor 15 attached thereto. The control unit is the solenoid valve 16 along with the solenoid control 20 which receives the incident signal line 22 from the emergency controller 44. The test signal, which is a pneumatic signal in Snowbarger, is on line 28 representing a pressure change which is merely connected straight through by the solenoid valve 16 to the pressure line 19 which controls the actuator 17 to move the element 18. It is very important to understand that in Snowbarger neither the solenoid valve 16 or the solenoid control 20 are *operated* by the pressure on line 28. This is clear from Snowbarger at column 4, lines 45-49 stating that the DVC 14 may continuously adjust the actuator output air pressure on line 28 to move the position of the valve plug. This is further clear from column 4, lines 39-42 indicating that the target plug position is estimated by measuring the output pressure on line 28 which is directly proportional to the position of the emergency shutdown valve's valve stem. Thus the pressure on line 28 for the testing *does not influence, test, or operate the solenoid valve 16 at all* but rather directly controls the pressure on 19, with solenoid valve 19 merely operating as a connection. Since items 16 and 20 in Snowbarger are the control unit, *the control unit is not operated and tested.* Furthermore, contrary to the language of claim 26, the control unit 16/20 in Snowbarger does not *partially move* the coupling element during the test. Rather only the pressure on line 28 output from the position controller 14 (connected to sensor 15) controls the partial movement, and not the control unit. Thus the language of claim 26 readily distinguishes. This is further

highlighted by the language of claim 26 at the end of the claim indicating that the measurement value from the sensor determines whether the control unit and the pneumatic actuator have correctly operated the control valve. In Snowbarger, the measurement value from the sensor is not used to determine whether the control unit is operated properly since the control unit is not tested or operated at all by the test pressure on line 28. In Snowbarger only the pneumatic actuator is tested or operated by the test pressure on line 28.

Column 4, lines 17-27 of Snowbarger discusses a "redundancy". This redundancy, however, only relates to a complete opening of the solenoid valve 16 and exhausting of the air pressure on line 19 out on exhaust line 21, thus causing a spring on the actuator 17 to move the valve stem 18. However, this is *no partial movement* of coupling element 18 by a control unit but rather a complete movement. Thus this "redundancy" disclosure is clearly distinguished over by claim 26 reciting that in testing the operational capability, the control unit only partially moves the coupling element. Furthermore, there is no disclosure in Snowbarger that this "redundancy" has anything to do with a testing of the system with a test signal, but rather describes only incident control, and not the testing.

The secondary Rosenberg reference was only cited for a motion sensor and thus does not satisfy the missing limitations of Snowbarger.

The secondary Scheideler reference was only cited for a motion sensor and thus does not satisfy the missing limitations in Snowbarger.

The secondary reference Konieczynski was only cited for a switching device connected to the solenoid valve and therefore does not suggest the missing features in Snowbarger.

Dependent claim 27 distinguishes by reciting that the control unit comprises a solenoid valve which partially moves the coupling element. This distinguishes over Snowbarger since in Snowbarger the solenoid valve 16 does not move at all when the pneumatic test signal is present on line 28 passing through the valve 16 at line 19. In Snowbarger, the valve 16 does not execute a partial movement and is not activated to test the valve 16 or control 20.

Dependent claim 28 distinguishes by reciting that both the incident signal line and the test signal are electronic. This clearly distinguishes over Snowbarger where the pneumatic test pressure on line 28 is not electronic, but pneumatic.

Dependent claim 29 distinguishes by reciting that the electronic test signal sent to the control unit is also connected to the incident electronic signal line input of the control unit. This can be seen in Applicants' preferred embodiment where line 11 and line 6 both go to the same input at control unit 4. This clearly distinguishes over Snowbarger, since in Snowbarger his control unit made up of the solenoid control 20 and solenoid valve 16 have two separate inputs – the electrical incident signal input on line 22 and the pneumatic test signal input at line 28.

Dependent claim 30 distinguishes over Snowbarger at least by reciting a switch device which interrupts the signal line to the control unit when the test signal is generated. This can be seen in Applicants preferred embodiment at 12 which interrupts the signal line 6 and feeds in the electronic signal 11. Snowbarger has separate inputs and therefore no such switch.

Dependent claims 31-38 distinguish at least for the reasons noted with respect to claim 26 and also by reciting additional features not suggested.

Independent system claim 39 distinguishes at least for the reasons noted with respect to method claim 26. Dependent claims 40-51 distinguish at least for the

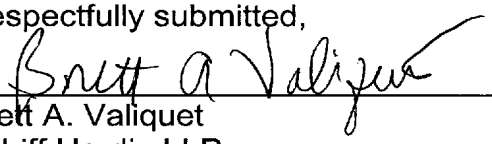
reasons noted with respect to claim 39 and also by reciting additional features not suggested.

Independent system claim 52 distinguishes at least for the reasons noted with respect to claim 39.

Allowance of the application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Respectfully submitted,



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